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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/153,781	09/16/1998	LOUIS B. ROSENBERG	IMM1P053	6020

34300 7590 10/11/2006

PATENT DEPARTMENT (51851)
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EXAMINER	
LIANG, REGINA	

ART UNIT	PAPER NUMBER
2629	

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/153,781	ROSENBERG ET AL.	
	Examiner	Art Unit	
	Regina Liang	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *RCE filed 8/22/06*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *See Continuation Sheet* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,5-8,12-15,17-23,25,27-29,33,34,36-40,42-49,51-56,58-70,72-76,78-82,84-90,92-96 and 98-101* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 2,5-8,12-15,17-23,25,27-29,33,34,36-40,42-49,51-56,58-70,72-76,78-82,84-90,92-96 and 98-101.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/22/06 has been entered. Claims 2, 5-8, 12-15, 17-23, 25, 27-29, 33, 34, 36-40, 42-49, 51-56, 58-70, 72-76, 78-82, 84-90, 92-96, 98-101 are pending.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 2, 12, 13, 17-21, 36-40, 49, 51, 52, 75 are rejected under 35 U.S.C. 102(b) as being anticipated by Pierce et al. (5,299,810).

With regard to claim 2, Pierce et al. teaches a system (figure 1) comprising: a network (figure 2 items 77 and 78); a first computer coupled to said network (figure 2, item 74), said first computer comprising a first visual display (figure 2, item 42) and a first interface device capable of providing a first computer input (figure 2, "first interface device" including items 62, 66, 90 and 12), said first interface device comprising an actuator capable of providing tactile sensations in response to a haptic feedback signal provided by said first computer (figure 2, item 26 and

column 1, lines 50-55), said first computer developing a first image in a first gaming environment on said visual display that is associated with first stored tactile sensation information (figure 1, item 114), wherein said first computer produces said first image and said haptic feedback signal based at least in part on information received from a second computer (figure 2, item 76) and based at least in part on said first computer input (column 1, lines 57-69 and column 2, lines 1-10; col. 5, lines 17-45; col. 9, lines 32-60), and said second computer coupled to said network and comprising a second visual display (figure 2, item 44) and a second interface device capable of providing a second computer input (figure 2, "second interface device" including items 68, 72, 92 and 14), said second interface device comprising an actuator capable of providing haptic feedback in response to a haptic feedback signal provided by said second computer (figure 2, item 28), said second computer developing a second image in a second gaming environment on said second visual display substantially simultaneously with said development of said first image in said first gaming environment (figure 1, item 110), said second image associated with second stored tactile sensation information (figure 2, item 28), wherein said second computer produces said second image and said haptic feedback signal based on information received from said first computer and based on said second computer input (column 1, lines 57-69 and column 2, lines 1-10; col. 5, lines 17-45; col. 9, lines 32-60).

With regard to means claim 12, Pierce et al. was shown above in regard to the rejection of apparatus claim 1 to have an apparatus that shows an equivalent means which reads on most of claim 12 language. In addition Pierce et al. teaches claim 12 requires the "first interface device" to be a human/computer interface means and figure 1 clearly illustrates a human interface.

With regard to claim 13, Pierce et al. teaches a system as recited in claim 12 wherein said second computer means input comprises at least one of a position input for said human/computer interface device, and a button click input (figure 2, item 90).

With regards to claim 49 Pierce et al. teaches a system as recited in claim 12, wherein said second computer means receives position information from said first computer means over said network, said position information describing a position of a user manipulatable object of human/computer interface means included in said first computer means (figure 1).

With regard to method claim 17, Pierce et al. was shown above in regard to the rejection of apparatus claim 1 to have an apparatus that makes the method of claim 17 anticipated. In addition Pierce et al. teaches "wherein said first computer information comprises information representing a position of a user manipulatable object generating an image to be displayed on a visual display of said second computer" (figure 1, items 66 and 60) ; And further "haptic" is equivalent to tactile as used in claim 1.

With regard to claim 18, Pierce et al. teaches a method as recited in claim 17 wherein said first computer information includes haptic feedback information indicating a tactile sensation to be output by said second haptic feedback device (figure 1, item 58 and figure 2 item 26).

With regard to claim 19, Pierce et al. teaches a method as recited in claim 17 further comprising sending second computer information from said second computer to said first computer over said network (figure 2, items 77 and 78).

With regard to claim 20, Pierce et al. teaches a method as recited in claim 19 wherein said second computer information includes said input information from said second haptic

feedback device and haptic feedback information indicating a tactile sensation to be output by said first haptic feedback device (figure 1, item 58 and figure 2 item 26).

With regard to claim 52, Pierce et al teaches a method as recited in claim 19 wherein said second computer information includes information needed to update a simulated graphical object provided in an environment running on first computer (figure 1 , item 110 and 58).

With regard to claim 21, Pierce et al. teaches a method as recited in claim 17 wherein said image includes displaying a first graphical object controlled by a user of said first haptic feedback device, and displaying a second graphical object controlled by a user of said second haptic feedback device (figure 1).

With regards to claim 51, Pierce et al. teaches a method as recited in claim 17 wherein said first computer information includes information needed to update a simulated graphical object displayed by said second computer (figure 1).

With regard to method claim 38, Pierce et al. was shown above in regard to the rejection of apparatus claim 2 and method claims 12 and 17 to have an apparatus and method that makes the method of claim 38 anticipated. In addition Pierce et al. teaches wherein said second computer information comprises position information describing a position of a manipulandum of a second haptic feedback device (figure 1, items 68 and 60).

With regard to claims 36, 37, 39, and 40, Pierce et al. was shown above read on all limitation of these claims.

With regard to method claim 75, Pierce et al. was shown above in regard to the rejection of apparatus claim 2 and method claims 12 , 17 and 38 to have an apparatus and method that makes the method of claim 75 anticipated. In addition Pierce et al. teaches "said information

comprising haptic feedback information and position information for a graphical object displayed by said second computer" (figure 1 illustrates graphical objects on two displays and items 110 and 114 correlate to haptic feedback).

4. Claim 27 is rejected under 35 U.S.C. 102(b) as being anticipated by Yamakita et al. Tele-Virtual reality of dynamic mechanical Model", Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots And Systems, Raleigh, NC July 7-10, 1992.

With regard to claim 27, Yamakita et al. teaches a method for providing physical interaction over a computer network (abstract and figure 1) comprising: enabling first information comprising an indication of movement of a first manipulandum (figure 1, Actuator 1) coupled to a first computer and first feel sensation information indicating a type of force sensation (figure 1, Controller 1) to be output over said computer network (figure 1, model) to a second manipulandum (figure 1, Actuator 2) coupled to a second computer (figure 1, Controller 2); causing a first force to be applied to said second manipulandum based at least in part on said indication of movement of said first manipulandum (figure 1, remote tug of war system also see figure 6); enabling second information comprising an indication of movement of said second manipulandum and second feel sensation information indicating a type of force sensation to be output over said computer network to said first manipulandum; and causing a second force to be applied to said first manipulandum based at least in part on said indication of movement of said second manipulandum (figure 1, remote tug of war system also see figure 6).

Claim Rejections - 35 USC § 103

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pierce et al. (5,299,810).

With regard to claim 22 Pierce et al. does not illustrate a method as recited in claim 21 wherein said first and second graphical objects are paddles. He instead illustrates them being vehicles such as a car however since a boat is also a vehicle and further since boats can have paddles such a feature would be obvious and simply viewed as merely directed toward an obvious intended use of the Pierce et al. gaming system.

6. Claims 3-5, 7, 11, 23, 28, 29, 31, 41-48, 53-56, 58-70, 72-74, 76, 78-82are rejected under 35 U.S.C. 103(a) as being unpatentable over Pierce et al. (5,299,810) in view of Yamakita et al. Tele-Virtual reality of dynamic mechanical Model", Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots And Systems, Raleigh, NC July 7-10, 1992.

With regard to claim 58, Pierce et al. was shown above to cover most of the limitations. However Pierce et al. does not illustrate "a server computer over a network" Pierce et al. instead use a local "common ram board" to create a network means for his two computers.

Yamakita et al. illustrates in figure 1 two Sites 1 & 2 remote to each other transmitting and receiving haptic information to and from a satellite above where it is clear that the satellite functions as a server computer between the two computers.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Pierce et al. apparatus to use a server computer on a network as taught by Yamakita because the feature of being able to play the game with other players at any

location such as Japan and USA would clearly be desirable and therefore motivational to all users.

With regard to claims 3, 4, 11, 41, the combination of Pierce et al. and Yamakita et al. do not illustrate the use of well known standards of practice such as TCP/IP protocols or sending information to Uniform Resource Locator (URL) and since the references lacks specific communication details it would have been obvious to one of ordinary skill in the art at the time of invention was made to implement these features because the combination of Pierce et al. must use some communication method and one would be motivated to use conventional methods of communication because there is less risk in using standards that are known to work. The examiner also serves official Notice that TCP/IP and URL existed before applicant's effective filing data.

With regard to claim 5, the combination of Pierce et al. and Yamakita et al. teaches a system as recited in claim 2 wherein said first interface device includes a user manipulatable object for receiving input from said user, said user manipulatable object being movable in two degrees of freedom (see Pierce et al. figure 2, item 62).

With regard to claim 7, the combination of Pierce et al. and Yamakita et al. teaches a system as recited in claim 5 wherein said user manipulatable object is receptive to a finger of said user for manipulating said user manipulatable object in said two degrees of freedom (see Pierce et al. figure 2, item 62).

With regard to claims 44 and 45, the combination of Pierce et al. and Yamakita et al. was shown above to cover these limitations.

With regard to claim 46, the combination of Pierce et al. and Yamakita et al. suggest a system as recited in claim 45 wherein said projectile includes a ball or puck because Pierce et al. does not state what the shape of his projectile is it would be obvious that it takes on common shapes such as ball like or puck like.

With regard to claim 47, the combination of Pierce and Yamakita et al. suggest a system as recited in claim 2 wherein said image displayed in said second gaming environment includes a graphical object having a location based on position information received from said second interface device, said graphical object able to collide with a different graphical object displayed in said second gaming environment, said different graphical object having a location based at least in part on said information received from said first computer (see Pierce figure 1 items 110 and 58).

With regard to claim 48, the combination of Pierce and Yamakita et al. suggest a system as recited in claim 2 wherein said image displayed in said second gaming environment includes a graphical object having a location based on position information received from said second interface device, said graphical object able to collide with an obstruction displayed in said second gaming environment (see Pierce figure 1 items 110 and 58).

With regard to claim 23, the combination of Pierce and Yamakita et al. suggest a method as recited in claim 21 wherein said first and second graphical objects are displayed in a web page is viewed as an obvious feature of a network because the window opened up is considered the web page when talking to a remote user.

With regard to claims 53-56, limitations were shown above by the combination of Pierce and Yamakita et al.

With regard to claims 42-43 limitations were shown above by the combination of Pierce and Yamakita et al.

With regard to claim 28, the combination of Pierce and Yamakita et al. teaches a method as recited in claim 27 further comprising developing an image on a visual display of said first and second computers, said image portraying a graphical environment at least partially responsive to said movement of said first manipulandum or said second manipulandum (see Pierce et al. figure 1 and figure 2 item 62 and 68).

With regard to claim 29, the combination of Pierce and Yamakita et al. teaches a method as recited in claim 28 wherein said graphical environment includes a first graphical object controlled by said first manipulandum and a second graphical object controlled by said second manipulandum, and wherein when said first and second graphical objects interact in said graphical object, forces are applied to said first manipulandum and said second manipulandum (see Pierce et al. figure 1 and figure 2 items 62 and 68).

With regard to claim 31, the combination of Pierce and Yamakita et al. teaches a method as recited in claim 27 wherein each of said first and second information includes feel sensation information indicating a type of force sensation to be output (see Pierce et al. figure 2, items 26 and 28).

With regard to claims 59-70, the combination of Pierce and Yamakita et al. was shown above to read on all these limitations.

With regard to claims 72 and 73, the combination of Pierce and Yamakita et al. suggest a method as recited in claim 75 wherein said first computer is a client computer and said second

computer is a server computer because it is obvious that when you are playing the computer instead of another actual user you would refer to one computer as sever and the other client.

With regards to claims 74 and 76, the combination of Pierce and Yamakita et al. was shown above to teach all of these limitations.

With regard to claim 77 ,the combination of Pierce and Yamakita et al. teaches a method as recited in claim 75 wherein said information received from said second computer includes visual information depicting a body part because Pierce shows a vehicle and it would be obvious to have people who have body parts inside.

With regard to claim 78, the combination of Pierce and Yamakita et al. teaches method ,as recited in claim 75 wherein said visual display is updated by moving a graphical object within a graphical game environment based on position data received from said haptic feedback device, where a collision between said graphical object and a different graphical object can detected to cause said tactile sensation to be output (see Pierce et al figure 1, item 114).

With regard to claim 79, the combination of Pierce and Yamakita et al. teaches a method as recited in claim 75 wherein said first computer receives an indication of a gaming event in said information, said first computer synchronizing said visual display associated with said gaming event with said tactile sensation that is associated with said gaming event (see Pierce et al. figure 1, item 114 and 110).

With regard to claim 80-81, the combination of Pierce and Yamakita et al. teaches a method as recited in claim 79 wherein said gaming event is a collision, explosion (see Pierce et al. figure 1, item 114 and 110).

With regard to claim 82, the combination of Pierce and Yamakita et al. teaches a method as recited in claim 79 wherein said visual display is updated at a rate substantially faster than said tactile sensation (see Yamakita et al. abstract).

7. Claims 6, 8, 14-15, 25, 33-34, and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pierce et al. (5,299,810) in view of Ouhyoung et al. "A low-Cost Force Feedback Joystick and its use in PC Video Games", IEEE Transactions on Consumer Electronics, Vol 41. No. 3, AUGUST 1995 pages 787-794 and Kelley et al. "MagicMouse: Tactile and Kinesthetic Feedback in the Human-Computer Interface using an Electromagnetically Actuated Input/Output Device.

With regard to method claim 89, Pierce et al. was shown above in regard to the rejection of apparatus claim 2 and method claims 12 , 17, 38 and 75 to have an apparatus and method that makes most of the apparatus limitations of claim 89 anticipated. And in addition Pierce et al. teaches "a user manipulatable object moveable in at least one degree of freedom and operable to control a position of a first graphical object displayed by said first computer in a graphical environment (figure 2, item 62 "Steering Handle" act as joystick for control of graphical "vehicle") at least one sensor operative to detect a position of said user manipulatable object in at least one degree of freedom" (It is clear that a steering wheel such as item 62 must have a sensor detecting its position in order for it to work and control the graphical object),

Pierce et al. does not illustrate the use of, "a local controller, separate from and communicating with said first computer, and coupled to said actuator and said sensor, said local controller receiving haptic feedback data from said first computer",

Ouhyoung et al. teaches a local controller with the above claim features in figure 3b and note also used in a PC Video Game.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Pierce et al. steering wheel to have the above features as taught by Ouhyoung because Kelley et al on page 9 makes a motivational statement, "a dedicated microcontroller is employed to distribute the computational load and to afford adequate force feedback".

With regard to claims 6 and 8, the combination Pierce et al. /Ouhyoung et al./Kelley was shown in claim 89 to read on these limitations.

With regard to claims 14, the combination Pierce et al. /Ouhyoung et al./Kelley was shown in claim 89 to read on these limitations.

With regard to claim 15, the combination Pierce et al. /Ouhyoung et al./Kelley teaches a system as recited in claim 14 wherein said second computer means sends a force feedback command to said local controller means that can be parsed by said local controller means such that said controller means can control said actuator means in response to said force feedback command in a control loop with said sensor means (see Ouhyoung figures 3b and 4).

With regard to claim 25, the combination Pierce et al. /Ouhyoung et al./Kelley a method as recited in claim 17 wherein said second haptic feedback device includes a local controller that communicates with said second computer, wherein said local controller parses a haptic feedback command sent by said second computer such that said local haptic can control said actuator in response to said haptic feedback command in a control loop with at least one sensor of said second haptic feedback device (see Ouhyoung figures 3b and 4).

With regard to claims 33-34, the combination Pierce et al. /Ouhyoung et al./Kelley was found above to teach all of the limitations of claims 33-34.

8. Claims 84-88, 90, and 92-96, 98-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Pierce et al. and Yamakita et al. as applied to claim 58 above, and further in view of Ouhyoung et al. "A low-Cost Force Feedback Joystick and its use in PC Video Games", IEEE Transactions on Consumer Electronics, Vol 41. No. 3, AUGUST 1995 pages 787-794 and Kelley et al. "MagicMouse: Tactile and Kinesthetic Feedback in the Human-Computer Interface using an Electromagnetically Actuated Input/Output Device.

With regard to method claim 101, the combination of Pierce et al. and Yamakita et al. was shown above in regard to the rejection of method claim 58 to have a method that makes most of the limitations of claim 89 anticipated. In addition the combination of Pierce et al. and Yamakita et al. teaches "each of said plurality of client computers in communication with the Internet" (see Yamakita figure 1 where claim term "internet" is broadly read to be any network), enabling said computer-game simulation of said particular client computer to determine if said first graphical object displayed on said client computer has collided with said second graphical object and determine a tactile sensation to generate if said collision has occurred (see Pierce et al. figures 3 and 4).

The combination of Pierce et al. and Yamakita et al. does not illustrate, "wherein said haptic feedback device comprises a user manipulatable object, a movement of said user manipulatable object tracked by a sensor of said haptic feedback device, and wherein said local model receives position data from said haptic feedback device describing said movement and sends haptic feedback data to said haptic feedback device".

Ouhyoung et al. teaches a local controller with the above claim features in figure 3b and note also used in a PC Video Game.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Pierce et al. steering wheel to have the above features as taught by Ouhyoung because Kelley et al on page 9 makes a motivational statement, "a dedicated microcontroller is employed to distribute the computational load and to afford adequate force feedback".

With regard to claims 84-88, 92, and 94-100 the combination of Pierce et al. /Yamakita/Ouhyoung et al./Kelley was shown above to read on all of these limitations.

With regard to claim 90 the combination of Pierce et al. /Yamakita/Ouhyoung et al./Kelley suggest a device as recited in claim 84 wherein said user manipulatable object is constrained to move in two planar degrees of freedom, wherein said actuator is a first voice coil actuator, and further comprising a second voice coil actuator, wherein said cursor is controlled by said user manipulatable object to select said displayed element on said web page (see Kelley figure 1)

With regard to claim 93, the combination of Pierce et al. /Yamakita/Ouhyoung et al./Kelley suggest a method as recited in claim 97 wherein said first graphical object is a representation of sporting equipment because Pierce et al. illustrates a car game and since race cars are the equipment used by race car drivers it reads on it.

Response to Arguments

9. Applicant's arguments filed 12/17/2004 have been fully considered but they are not persuasive.

With respect to claim 2, applicant argues that Pierce patent does not teach "the first computer produces said first image and said haptic feedback signal based at least in part on information received from a second computer and based at least in part on said first computer input" (page 19 of the remarks). This argument is not persuasive. For example, as shown in Fig. 1 and disclosed in col. 5, lines 36-42 of Pierce that "a user can sits in the seat 12 and "drive" the simulated vehicle 58, displayed in the main sector 52 on the monitor 44. Furthermore, another user can sit in the seat 14 and "drive" the simulated vehicle 60, which is displayed in the minor sector 54 on the monitor 42", this reads on the first computer produces the first image based at least in part on information received from a second computer. Pierce also discloses determining whether the vehicle 58 (controlled by the computer 74) has been hit by the vehicle 60 (controlled by the computer 76), if determined the vehicle 58 was hit by a projectile fired by the vehicle 60, the computer 74 causes the solenoid (actuator 12) to be energized, this gives the user who is sitting in the seat 12 a sensation of being thumped (see col. 8, line 61 to col. 9, line 8), this reads on the first computer produces haptic feedback signal based at least in part on information received from a second computer.

With respect to claims 5, 7, 44-48, applicant's argument are not persuasive since Pierce teaches "the first computer produces said first image and said haptic feedback signal based at least in part on information received from a second computer and based at least in part on said first computer input" (note the remarks in claim 2 above).

With respect to claims 6 and 8 (page 20 of the remarks), applicant argues the combination of Pierce, Ouhyoung, and Kelly does not teach or suggest "the first computer produces said first image and said haptic feedback signal based at least in part on information received from a second computer and based at least in part on said first computer input". This argument is not persuasive, see the remarks in claim 2 above. Applicant also argues neither Ouhyoung nor Kelley teach receiving data at a fist computer from a second computer, this is not persuasive. Ouhyoung is used to teach a local controller used in a PC video game, and Kelley is used to teach a motivational statement for using a local controller.

With respect to claims 17-21, 51 and 52 (page 21 of the remarks), applicant argues Pierce does not disclose "causing a tactile sensation signal to be provided to said haptic feedback device from said second computer, said tactile sensation signal being based, at least in part, on said first computer information and said input information". This is not persuasive. Pierce discloses determining whether the vehicle 58 (controlled by the computer 74) has been hit by the vehicle 60 (controlled by the computer 76), if determined the vehicle 58 was hit by a projectile fired by the vehicle 60, the computer 74 causes the solenoid (actuator 12) to be energized, this gives the user who is sitting in the seat 12 a sensation of being thumped, this reads on "causing a tactile sensation signal to be provided to said haptic feedback device from said second computer, said tactile sensation signal being based, at least in part, on said first computer information and said input information". Applicant also argues Pierce does not have input information from a controller, this is not persuasive. Pierce teaches "the computer determines whether its associated user has depressed the firing trigger 90" (col. 8, lines 5-6), this reads on an input information from a controller.

With respect to claims 22 (page 21 of remarks), 23, 53-56 (page 22 of the remarks), 25 (page 23 of the remarks), note the discussion of claims 17-21, 51 and 52 above.

With respect to claims 12, 13, 49 (pages 23-24 of the remarks), and claims 14, 15 (page 24 of the remarks), applicant argues that the Pierce patent does not teach "said second computer means further comprising means for interpreting said information repeatedly received from said first computer means over said network means". This argument is not persuasive because Fig. 2 of Perce teaches both computer means (74 and 76) connected to each other and received information from each other over the network means (items 77 and 78 in Fig. 2).

With respect claim 27 (page 25 of the remarks), applicant argues that the Yamakita reference does not reach "enabling first information comprising an indication of movement of a first manipulandum coupled to a first computer and first feel sensation information indicating a type of force sensation to be output by said first computer over said computer network". This argument is not persuasive Yamakita clearly discloses a technique for tele-virtual reality of dynamic mechanical models, which means that one dynamic mechanical model can be shared by people in distant place (see Figs. 1, 6 and Table 3 List of variable of an equivalent circuit for a remote tug of war system at page 1106).

With respect to claim 28 and 29 (pages 25-26 of the remarks), applicant argues that neither Pierce nor the Yamakita reference teaches outputting information comprising an indication of movement of a first manipulandum coupled to a first computer and first feel sensation indicating a type of force sensation to be output over a computer network to a second manipulandum coupled to a second computer. These arguments are not persuasive because Pierce clearly teaches that both players are interactive to each other. For example, Pierce clearly

discloses that when the computer 74 determines, in block 100, that a projectile on an object has been fired by the opposing vehicle 60, the computer 74 updates the monitor 42 to cause the monitor 42 to display image of a flash of light one the icon representing the vehicle 60. This is to provide a visual indication of the projectile launch to the user sitting in the seat 12 and "driving" the vehicle 58. Thus the image of the flash of light 112 in the "rear-view mirror" of the vehicle 58 shown in Fig. 1 indicates that the vehicle 60 has just launched a projectile toward the vehicle.

With respect to claims 33 and 34 (pages 26-27 of the remarks), note the discussion with respect to claims 27-29 above.

With respect to claims 36-40 (page 27 of the remarks), applicant argues Perce discloses storing data relating to the position and orientation of a vehicle, not the position of the interface device, in a common RAM. This is not persuasive. Perce discloses storing data relating to the position and orientation of a vehicle, wherein the position and orientation of a vehicle is manipulated by the interface device, thus Perce discloses storing data relating to the position of the interface device, in a common RAM as claimed.

With respect to claims 42 and 43 (pages 27-28 of the remarks), note the discussion of claims 36-40 above.

With respect to claim 58 (page 29 of the remarks), in response to applicant's argument in the combination of Pierce and Yamakita, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references.

Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

With respect to claim 75 (page 30 of the remarks), applicant argues that Pierce does not disclose a first computer receiving haptic feedback information from which the first computer may base a haptic feedback signal, wherein the haptic feedback information is received from a second computer. This argument is not persuasive because figure 1 of Pierce clearly illustrates graphical objects on two displays and items 110 and 114 correlate to haptic feedback.

With respect to claims 72-74, 76 and 78-82 (pages 30-31 of the remarks), note the discussion of claims 58 and 75 above.

With respect to claim 89 (page 31 of the remarks), claims 84-88 and 90 (page 32 of the remarks), in response to applicant's argument in the combination of Pierce, Yamakita, Ouhyoung and Kelley, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

It is believed that the claimed structures are met by the prior art references as applied above.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Regina Liang
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Art Unit 2674

9/25/06